Amendments to the Specification:

In the following amendments to the specification, the paragraph numbers refer to the paragraph numbers in the application as filed, not to the paragraph numbers of the application as published which are slightly different.

Please replace paragraph **[0037]** with new paragraph **[0037]**:

[0037] The data providing system of this embodiment is capable of providing data to a great number of users as objects, and has such a structure as shown in FIG. 1, in which a plurality of server stations 2, each of which is an example of the first device, and a host station 3, which is an example of the second device, are connected together via a network, and also each server station 2 and a terminal device 1 operated by the user are connected via a network 4. The host station carrieds out digital broadcasting via a satellite BC.

Please replace paragraph **[0038]** with new paragraph **[0038]**:

[0038] As the networks 4 and 5, the Internet can be used. When only the Internet is used, there may be ~~thea~~ time when it is difficult to connect a terminal device to the server station 2, as in the case where a number of terminal devices 1 start the setting-up of the communications at the same time. For this reason, if it is necessary to assure the communication between the server station 2 and the host station 3, it is preferable that independent networks are employed for the networks 4 and 5, respectively, rather than using only the Internet.

Please replace paragraph **[0042]** with new paragraph **[0042]**:

[0042] The server station which is operated as described above can be realized by a computer including a CPU (central processing unit), a communication mechanism, a RAM (random access memory), a ROM (read only memory) and a memory device. The CPU reads and executes a predetermined program and data, and thus forms a function block and data file, which are used to realize the processing operation executed by the server station 2, as will be described later. Programs and the like are stored in the memory device which can be read by the CPU, or distributed via the network. The communication mechanism is of a conventionally known type for transmitting and receiving data between the server station and the terminal device 1 as well as the host station 3 via the networks 4 and 5. More specifically, this mechanism includes a section for receiving and transmitting data from and to the terminal device 1, and another section for receiving and transmitting data from and to the host station 3, and these sections independently ~~carries~~carry out the transmission and reception of data. The RAM temporarily stores data generated as a result of each processing operation, as well as data transmitted from the terminal device or the host station 3 via the communication mechanism. The ROM stores basic programs and data necessary for the operation of the server station 2. The memory device is a so-called hard disk in which a magnetic recording medium is equipped, and it stores, for example, large-size data such as the operating system and application programs.

Please replace paragraph **[0043]** with new paragraph **[0043]**:

[0043] An example of the structuralized functions formed by the CPU is shown in FIG. 2. As can be seen in FIG. 2, the server station 2 has a communication control section 210 and a main control section 211, and further various types of data files

including a user data storage unit D1, a historical data storage unit D2, a parts storage unit D3, a global data storage unit D4, an individual data storage unit D4, and an other site data storage unit D6 (here the term "site" refers to a server station or other Web server, and the term will be used ~~in~~with that meaning hereinafter).

Please replace paragraph **[0045]** with new paragraph **[0045]**:

[0045] The communication control unit 210 is used to transmit and receive data among itself, the host station 3, the terminal device 1 and other sites. When the communication control unit 210 transmits and receives individual data between itself and a terminal device 1, it receives instruction data from the terminal device 1 serving as a communication opponent, and sends back data in response to the instruction data to the terminal device 1 which made the instruction.

Please replace paragraph **[0046]** with new paragraph **[0046]**:

[0046] The user management unit 212 carries out authentication of the user at the time of accessing on the basis of, for example, the user identification data and the password stored in the user data storage unit D1, and then, if necessary, executes operations such as those carried out by a server station in the conventional digital broadcasting, for example, sending a key of cryptograph to the terminal device 1. The load analysis unit 213 analyzes the present load status of the self station on the basis of the number of accesses made by the terminal device 1 to that station, the results of the past analysis stored in the historical data storage unit D2, and the processing contents of the same type to the terminal device 1.

Please replace paragraph **[0054]** with new paragraph **[0054]**:

[0054] The communication control unit 310 transmits data received from each server station 2 to the site management unit 312. Here, if necessary, individual data are transmitted between the communication control unit and each server station 2, and further this unit 311 transmits the same data to each server station 2 all at the same time ~~all~~.

Please replace paragraph **[0056]** with new paragraph **[0056]**:

[0056] The site management unit 312, as required, stores and manages the identification data of each server station 2 to the site data storage unit D12, and further monitors or analyzes the load data sent from each server station 2 and stores the result data to the site use status storage unit D11 for each server to be managed. Usually, load data is notified from each server station 2; however it can be analyzed autonomously. The site management unit 312 manages a reference value determined for each site. When the load in a server station 2 is equal to or more than the reference value for the site, the management unit 312 judges that the server station 2 is in a congested state, and sends to the server station 2 ~~such~~ an instruction to transmit necessary data in order for some other one in place of the server station 2 to provide the data to the respective terminal device 1.

Please replace paragraph **[0057]** with new paragraph **[0057]**:

[0057] The provided data management unit 313 sorts and integrates global data sent from each server station 2, and further prepares useful data to be provided for each user, to be transmitted to the broadcast control unit 311. The useful data

are, for example, the load of each server station 2 and the load status of the network 4, and they are mapped with predetermined map data stored in the map data storage unit D13, before they are provided. The map data contains, for example, a congestion map, which visually expresses the degree of congestion, which constantly chang~~in~~ges in real time, for each site (that is, Real Time Congestion Map). Further, this unit provides information as to which site is busy and which site is popular in a menu form.

Please replace paragraph **[0065]** with new paragraph **[0065]**:

[0065] The data processing device 110 has a main bus B1 and sub-bus B2. These buses B1 and B2 are connected to each other via a bus interface INT in such a manner that they can be disconnected as needed. To the main bus B1, there are connected a main CPU 10 consisting of a first vector processing unit (VPU0 to be called the first VPU hereinafter) 20 tightly coupled with the CPU core, a second vector processing unit (VPU1 to be called the second VPU hereinafter) 21 which exists by itself, a graphical synthesizer interface (GIF) 30 serving as an arbiter for the first VPU 20 and the second VPU 21, and the like, a main memory 11 consisting of a RAM, a main DMAC (direct memory access controller) 12, and MPEG (moving picture experts group) decoder (MDEC) 13, as well as a graphic processing means (graphical synthesizer to be called "GS" hereinafter) 31 which is connected via the GIF 30. ~~To the GS 31, a~~A CRTC (CRT controller) 33 for generating a video output signal is ~~generated~~connected to the GS 31.

Please replace paragraph **[0066]** with new paragraph **[0066]**:

[0066] When staring the data processing device 10, the main CPU 10 reads the starter program from the ROM 17 on the sub-bus B2 via the bus interface INT, and starts the operating system by executing the starter program. Further, the CPU controls a media drive 60 and reads application programs and data from a medium 61 mounted in the media drive 60, which are then stored in the main memory 11. Further, the CPU carries out, in collaboration with the first VPU 20, a geometry processing on three-dimensional object data (coordinate values of apexes (representative points) of polygons) constituted by, for example, a plurality of basic figures (polygons).

Please replace paragraph **[0068]** with new paragraph **[0068]**:

[0068] As in the case of the first VPU 20, the second VPU 21 carries out calculations of floating points in parallel. Then, it generates a display list having contents of relatively simple two-dimensional polygon definition data. This data can be generated by operations for generating an image by the operation of an operating device ~~81~~ and a matrix, such as transparent conversion for a matter of a simple shape such as a building or an automobile, parallel light source calculation and two-dimensional curvature generation.

Please replace paragraph **[0070]** with new paragraph **[0070]**:

[0070] The GIF 30 is designed to arbitrate the display lists generated by the first VPU 20 and the second VPU 21 so that they do not collide with each other while they are transferred to the GS 31. The GS 31 holds graphical contexts, and reads a respective graphical context based on the identification data of the image context contained in the display list informed from the GIF 30. With use of the read context, a rendering

processing is carried out and thus polygons are drawn in a frame memory 32. The frame memory 32 can be used as a texture memory as well, and therefore a pixel image on the frame memory can be pasted as a texture on a polygon drawn.

Please replace paragraph **[0071]** with new paragraph **[0071]**:

[0071] The main DMAC 12 carries out a DMA transfer control onto each circuit connected to the main bus B1, and also carrieds out a DMA transfer control onto each circuit connected to the sub-bus B2 in accordance with the status of the bus interface INT. The MDEC 13 operates in parallel with the main CPU 10, and expands the data compressed by the MPEG (moving picture experts group) mode or JPEG (joint photographic experts group) mode or the like.

Please replace paragraph **[0072]** with new paragraph **[0072]**:

[0072] To the sub-bus B2, there are connected a sub-memory 15 consisting of a sub-CPU 14 having a structure of a microprocessor or the like, and a RAM, a sub-DMAC 16, a ROM 17 which stores programs including the operating system, a sound processing unit (SPU) 40 for reading sound data stored in a sound memory 412 and outputting it as an audio output, a communication control unit (ATM) 450 for transmitting or receiving data between itself and the server station 2 via the network 4, a media drive 60 for setting media such as CD-ROM and DVD-ROM, and an input unit 70.

Please replace paragraph **[0081]** with new paragraph **[0081]**:

[0081] The host station 3 receives the load data sent from the server station 2 (step S104), and compares it with the reference

value for the load status preset by the data analysis unit 311. When the access number indicated by the load data is larger than the reference value, it is judged that the server station 2 is in a congest~~ioned~~ed state. On the other hand, when the load data indicated by the load data is smaller than the reference value, it is judged that the server station 2 is not in a congest~~ioned~~ed state, and the operation proceeds on to the step 109 (step S105: No).

Please replace paragraph **[0082]** with new paragraph **[0082]**:

[0082] While in a congest~~ioned~~ed state, the host station 3 requests the respective server station 2 to send necessary data to the host station 3 so as to be able to serve as a substitute which can provide data for the terminal device 1 in place of the server 2 (step S105: Yes, S106).

Please replace paragraph **[0083]** with new paragraph **[0083]**:

[0083] When there is a request from the host station 3 that it will provide data in place of the server station 2, the respective server station 2 transmits the requested data and the other necessary data to the host station 3 (step S107). An example of such data provided in a substituted manner~~,~~ is the top page of an Internet homepage.

Please replace paragraph **[0084]** with new paragraph **[0084]**:

[0084] The host station 3 forms common data to be broadcasted, from ~~thus~~the obtained load data and data to be provided in the substituted manner, for each server station 2 (step S109). The thus formed common data are distributed to all of the terminal devices 1 all at once in real time (step S110). The user

receives the common data broadcasted from the host station 3 with the terminal device 1, on which the data are displayed.

Please replace paragraph **[0085]** with new paragraph **[0085]**:

[0085] With the above-described example of the operation, it is possible to find out the congestion state of each server station 2 before trying to access to the server station 2. Therefore, it is possible to cancel accessing ~~to~~of a server station 2 in a congest~~ion~~ed state ~~before~~ in advance. Since the data from that server station 2 are included in the common data distributed from the host station 3, it becomes possible for the user to obtain desired data without accessing ~~to~~ the server station 2.

Please replace paragraph **[0088]** with new paragraph **[0088]**:

[0088] The data appearing in the virtual reality space include data for the position or the like of an object image, as well as behavior limitation data used to limit the movement of each ~~and~~ individual object image.

Please replace paragraph **[0090]** with new paragraph **[0090]**:

[0090] In this example, in order to reduce the load on the processing and the size of data flowing through the network, the terminal devices 1 and each server station 2 share the basic parts data, the material data and the like, which constitute its partial space, and they carry out calculations for the virtual reality space at the same time in parallel. The parts data and material data of the terminal device 1 are recorded on a media such as a CD-ROM or DVD-ROM ~~by the~~ as they are received

individually from the server station or distributed by the broadcasting from the host station 3, and then these media are distributed. The parts data, the material data and the like are preserved in the host station 3 as well.

Please replace paragraph **[0092]** with new paragraph **[0092]**:

[0092] The server station 2 performs calculations for the mutual proximity effect between the partial spaces of the users accessing via the terminal devices 1 (excluding the users who are only standing by to watch) to the partial space managed by the station 2 itself, on the basis of the respective data such as the parts data and material data sent from the host station 3. The results of the calculations are sent back to the user as a response. At the same time, the space state data, which is the results of the calculations, are transferred by uplink to the host station 3. The "calculation of the mutual proximity effect" can be defined as the calculation of the change in the positional relationship between the object images of the user and others, and the change in the status when ~~on~~an object image is moved.

Please replace paragraph **[0094]** with new paragraph **[0094]**:

[0094] The terminal device 1 calculates the virtual reality space on the basis of the response from the server station 2 and the status data broadcasted, using the parts data and material data as in the case of the server station 2. In the case of the mutual proximity effect of a low latency, the reaction is calculated on the basis of the response from the server 2, and the result is sent back to the server station 2 as a response. The movement limitation between partial spaces is calculated on the basis of the data broadcasted from the host station 3 as a

remote operation. Thus, a user can stand by and watch the virtual reality space only by the broadcasted data without actually accessing to the server station 2. Further, the transfer of an object between partial spaces can be smoothly limited on the basis of the calculation of the status of the server station (partial space) to which an object is transferred, and the calculation of the remote operation, from the broadcasted data. In this manner, ~~a~~ congestion resulted~~ing by needles~~ from needless concentration of accessing can be avoided.

Please replace paragraph **[0102]** with new paragraph **[0102]**:

[0102] When it receives the variation data from each server station 2, the host station 3 integrates the received data so as to form integrated variation data. The integrated variation data is distributed to all of the terminal devices 1 in real time. The integrated data is supplied to each server station 2 as well (step S212 and S213). The integrated variation data includes the variation data of the virtual reality space within each server station 2, the behavior limitation data which changes along with the variation of the virtual reality space, the data of the load status of each server station 2, and the like. In the case where one virtual reality space is formed by a plurality of server stations 2, the integrate data sometimes includes the data of the global variation status generated by the variation status of each partial virtual reality space.

Please replace paragraph **[0106]** with new paragraph **[0106]**:

[0106] Further, from the integrated variation data from the host station 3, the status of the virtual reality space within some other server station 2 can be known, and therefore when the

terminal device 1 accesses another virtual reality space, the space of the same status as that of that virtual reality space can be constructed immediately. Furthermore, even a terminal device~~3~~ 1 which is not accessing any server station 2 can create and enjoy the status of the virtual reality space of a respective server station 2~~,~~ within the terminal device itself by receiving the integrated structure data and integrated variation data.

Please replace paragraph **[0107]** with new paragraph **[0107]**:

[0107] It should be noted that the above-described examples present~~s~~ cases where a server station 2 provides individual data to a terminal device 1, and data common to a plurality of terminal devices 1 is broadcasted via a host station 3; however the present invention can be applied generally to all the cases where part of data to be provided is transmitted to all of the terminal devices 1 which are in a communicable state, from one of a server station 2 and the host station 3, and the rest of the data to be provided is transmitted to them from the other of the server station 2 and the host station 3, and thus the data to be provided is reproduced in each of the terminal devices 1 in real time.